

I-405 Corridor Program

TDM PACKAGE EXECUTIVE BRIEF

**DRAFT
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The I-405 TDM Package is an integral part of the comprehensive I-405 Corridor Program. It support many other program elements – e.g., HOV system, bus and high capacity transit, Transportation Systems Management. *TDM* is the acronym for Transportation Demand Management – transportation strategies that help to manage traffic congestion and relieve the impacts of highway construction.

The I-405 Corridor Program focuses on transportation needs for the 30 mile corridor, over the next 20 years. This brief summarizes the strategic TDM Package being considered by the study's committees.

The TDM Package for the I-405 corridor is anchored in the real-world TDM experience and expertise in the Puget Sound area. During the past twenty-five years, the region has strengthened its commitment to demand management, with programs like carpool ridematching, vanpooling, FlexPass, assistance with work scheduling and telework, Transportation Management Associations (TMAs), Commute Trip Reduction (CTR) services and the region's TDM Resource Center.

The I-405 TDM Package is seen as a model of what could be duplicated in other areas of the region. As other corridor TDM programs are developed, such as the one evolving within the Trans-Lake Study, they can benefit from lessons learned in the I-405 program, as well as, perhaps, join efforts and share overhead costs. Any duplication due to geographic overlap of study areas would be adjusted for as programs are funded.

I-405 TDM Package Goals

- ***Reduce drive-alone travel in the corridor*** – reducing single occupant vehicles (SOVs) and vehicle miles of travel (VMT);
- ***Shift trips out of the peak travel periods*** – away from the most congested morning and evening commute times; and
- ***Eliminate trips when possible*** – with telework, electronic communication, or shorter distance local travel.

Core Assumptions

Acknowledging the TDM services already in existence, the I-405 TDM Package reflects two guiding principles: to build on effective demand management services already in place and to customize advanced TDM measures for the market traveling within the corridor. These are the basic assumptions upon which the full TDM Package is built.

- ◆ Existing TDM services, both public and private, will continue;
- ◆ Existing public TDM programs will be expanded to meet new market demand;
- ◆ New corridor-wide trip reduction goals will be established, supported and implemented through a formal interlocal agreement;
- ◆ TDM strategies must be flexible, monitored, evaluated and adjusted over time;
- ◆ Funding will be provided for demonstration TDM projects, and limited funds will be available for those that are found to be effective; and
- ◆ Some level of centralized oversight and management of the new corridor TDM Package will be required over the 20-year project period.

The Adopted I-405 TDM Package

The Puget Sound region has had extensive experience with demand management strategies. Many strategies have proven their worth, and receive strong support from officials as well as the public. This TDM Package continues the region's support for established and highly effective TDM strategies – like the HERO program, public vanpooling, and employer Commute Trip Reduction (CTR) services. In fact, the major part (about $\frac{3}{4}$), of the I-405 TDM Package invests in expanding these activities.

On the other hand, TDM is a discipline that is always evolving. This is one of its advantages: TDM strategies adapt to changing markets and times. Some may be short term – focused on relieving the congestion caused by highway construction or major events. Other TDM strategies are just emerging: such as car sharing, using the Internet for telework, new land use strategies and techniques that impact non-work travel. To further these newer strategies, and to help determine their effectiveness, the I-405 TDM Package includes funding for pilot programs and demonstrations of new TDM measures and techniques.

Combining these strategies has led to an aggressive TDM package for the highway corridor – totaling \$450,000,000 over the 20-year implementation time line. The selected strategies and techniques are complementary – and they build on each other. As an example, a significant expansion in vanpooling will require expanded marketing and new employer programs -- as well as the capital and operating dollars needed for the expanded fleet. The effectiveness of the vanpool element clearly relies on the effectiveness of other demand management elements – and they are designed as a cohesive and integrated package.

Given the variety and interdependency of its various strategies, the TDM Package must be committed to flexibility. Programs must be monitored and evaluated – and the TDM strategy must be adjusted periodically to reflect new information and new TDM concepts. Consequently the package includes collaborative mechanisms to ensure that funds are continually focused – and re-focused – in the most effective manner.

The remainder of this brief describes the seven elements of the I-405 TDM Package. It is based on the assumption that a full, 20-year program will be funded and implemented. Although many issues are still unresolved, the brief suggests likely costs, service providers, and timing for implementation.

TDM Package Management --- Recommendations

The overall corridor TDM Package is complex and far-reaching. It will be administered by a variety of entities – including transit agencies, vanpool operators, local jurisdictions, Transportation Management Associations (TMAs), and WSDOT. Given the complexity, and 20-year duration of this program three mechanisms are being developed to provide guidance and coordination.

1. A project team will be established to oversee the 20-year project. The ***I-405 TDM Committee*** will monitor program performance and adjust TDM strategies and funding allocations when needed.
2. The WSDOT TDM Resource Center, at the Office of Urban Mobility, will staff the TDM Committee and provide ***central management*** support for the overall TDM Package.
3. The responsibilities of various TDM participants will be established in ***interlocal agreements*** and through funding contracts.

Core TDM Program

The Core Program is the *foundation for the full I-405 TDM Package*. It is expected to cost nearly \$20,000,000 over the 20-year project period -- representing 4.3% of the overall TDM budget. The program establishes a collaborative process to guide corridor TDM services and establishes the organizational framework for implementation. Funding is included to ensure that existing TDM services are able to meet the increased demand generated by new corridor activities, and that all corridor TDM activities are monitored and evaluated.

Program Elements	Services To Be Funded	20 Year Cost (2000 \$\$\$)
Expand Existing TDM Programs	<ul style="list-style-type: none"> expand HERO program for I-405 HOV lane enforcement provide staff and program materials to other TDM services that experience significant increases in demand 	\$8,150,000
Establish Interlocal Agreements	<ul style="list-style-type: none"> develop/implement agreements to institute new trip reduction goals and support for the TDM Package reimburse jurisdictions for staff needed to periodically develop/monitor agreements 	\$1,000,000
Monitoring & Evaluation	<ul style="list-style-type: none"> develop information to guide decision-making about TDM Package and adjustments provide staff for central administration, monitoring & evaluation 	\$6,500,000
Demonstration Projects	<ul style="list-style-type: none"> fund demonstrations within the corridor, including opportunities to test variations on existing services and innovations 	\$4,000,000

Implementation

Timing: The Core TDM Program provides the basic structure for implementing the entire I-405 TDM package. Consequently, it is important that this element receive funding as early as possible. The TDM Committee, key staff members and administrative structures must be in place prior to other start-up activities. It is likewise imperative that local service providers begin to gear up to meet increased demands. Only the demonstration projects could be delayed or staggered to correspond with funding cycles or construction of various corridor segments.

Roles: It is anticipated that WSDOT will provide management support and oversight for the I-405 TDM Package and coordinate evaluation activities. Local jurisdictions will receive funding to offset the increased workload caused by the new Interlocal Agreements. Local TDM service providers, both public and private, could be eligible for funding to help meet new demand and for demonstrations of program innovations. Transit agencies, local municipalities, CTR programs, as well as independent service providers such as the Commuter Challenge Program and local Transportation Management Associations (TMAs) will probably be involved in providing some of these core services.

Construction Mitigation: All TDM strategies provide operational mitigation, so only construction mitigation is addressed in this brief. The Core Program provides the structure for designing and implementing the demand management elements that will mitigate construction activities. Consequently, it should be in place prior to start-up activities; and monitoring and evaluation processes should be implemented from inception.

Vanpooling Program Element

Vanpooling is a proven TDM strategy and a key element of the I-405 TDM Package. More than 400 vanpools currently operate within the I-405 corridor and a recent market study found high potential for expanding that number. Every vanpool removes at least five vehicles from our roadways. Additionally, public vanpool programs are highly cost efficient since they recover most of their costs.

The objective of the vanpooling program element is to *add 1,700 new vanpools within the corridor*. Approximately 35% of the proposed TDM budget has been earmarked to support vanpooling activities – at \$159,118,800 -- and a very high level of effectiveness is expected. The vanpooling element includes four different components.

Program Elements	Services To Be Funded	20 Year Cost (2000 \$\$\$)
Intensive New Marketing	<ul style="list-style-type: none"> fund new marketing materials and campaigns at \$25,000 annually provide additional staff for marketing fund value-added product or rewards for every vanpool participant 	\$11,750,000
New Vanpool Vehicles	<ul style="list-style-type: none"> provides funding for 680 vans – adding 34 vanpools each year and tapping unmet demand high potential for alternative fuel vans 	\$26,628,800
50% Vanpool Fare Subsidy	<ul style="list-style-type: none"> establish a significant subsidy program for all vanpools operating in the corridor purchase another 1000 vehicles to meet demand generated by reduced fares fund additional marketing staff and program materials 	\$120,540,000
Owner-Operator Promotional Materials	<ul style="list-style-type: none"> fund new promotional materials at about \$10,000 annually 	\$200,000

Implementation

Timing: An early and aggressive implementation of this element is recommended. Vanpooling is highly cost effective and excellent service providers are already in place at local transit agencies. Since vanpool formation requires advance marketing new promotions should be initiated as soon as possible. Expansion of vanpool fleets, however, can be incremental. And, the 50% fare subsidy could be postponed until midway in the implementation plan when new techniques are needed to capture additional commuter markets.

Roles: Implementation roles will be shared among the region's providers:

- WSDOT will coordinate the acquisition of additional vanpool vehicles.
- Transit agencies will continue to administer vanpool services and fleet operations.
- Vanpool operators, employers, CTR programs, TMAs will all be involved in marketing.
- WSDOT will spearhead the development of non-traditional, consumer-direct promotions.

Construction Mitigation: Vanpooling can be an effective mitigation technique. Its ability to remove commuter SOVs from the road, easy identification for HOV priority access, and the high market potential in the corridor suggest that this service be featured in mitigation activities.

Public Information and Education

Public information, education and promotion programs *complement and increase the effectiveness of all other TDM elements*. The I-405 TDM Package allocates \$33,750,000 for this program element. This represents 7.5% of the total TDM budget.

This element is designed to keep the public highly informed about transportation issues, construction activities, and travel in the corridor. A second objective is to increase awareness and use of alternative travel options -- through focused informational and educational materials and personalized support services.

Program Elements	Services To Be Funded	20 Year Cost (2000 \$\$\$)
Public Information & Education Campaign	<ul style="list-style-type: none"> implement a major, new campaign focused on travel in the I-405 corridor develop coordinated information programs such as websites, corridor-wide promotions, education & special events provide significant increases in staffing, promotional materials and media 	\$25,000,000
Traveler Information Services	<ul style="list-style-type: none"> expand use of telecommunication and computer technologies for real time information on traffic, bus schedules, carpool and vanpool opportunities develop accessible information sources including telephone, websites, kiosks, signage systems 	\$2,250,000
Personal Trip Planning Assistance	<ul style="list-style-type: none"> develop new systems to provide custom, one-on-one assistance to I-405 travelers 	\$6,500,000

Implementation

Timing: To foster public acceptance and awareness of the I-405 plan this element should be implemented early in the project period. To support coordination among TDM service providers it is recommended that some activities be initiated immediately upon funding of the project.

- The central campaign should be updated and implemented in several phases – or communication rounds – every four to five years.
- Traveler information services will require an initial capital outlay early in the 20-year program and annual commitments to labor, materials, and promotions.
- Personal trip planning should be established as an ongoing service, but it can be implemented on a segmented or zone-related schedule.

Roles: The development of this element requires close coordination among various corridor agencies and organizations and the I-405 TDM Steering Committee is expected to take on the important functions of consensus building and oversight. It's likely that the central campaign will be contracted out to a public information/advertising agency. Traveler information services are currently provided by WSDOT, transit agencies, TMAs, news media, and others. Those entities are likely to continue working in this area and parts of the information and education effort will be delegated to them. Overall, this element could be coordinated and administered by WSDOT, by one or more of the local agencies, or by the private sector.

Construction Mitigation: Since this element can be implemented fairly quickly it is appropriate to initiate activities before roadway construction projects impact travelers – and as continuing mitigation for impacts from roadway or development projects over the 20 years.

Employer TDM Programs

Employers play key roles in bringing change to their employees' commutes. The importance of their commitment is illustrated by the success of CTR programs, which are estimated to have reduced drive-alone commuting to affected King County worksites by nearly 5% since 1993.

The objective of this program element is to *further reduce commute trips* and to change commute travel patterns by providing new support to employers and employer-based programs. This element will intensify assistance to 300 CTR-affected employers and expand CTR services to target 700 additional employers for voluntary trip reduction activities. The well-established effectiveness of employer programs justifies expanding resources, and this element is budgeted at \$170,000,000 over the 20-year project period. As a cornerstone to influence commuters, this element is slated to receive the largest proportion, at 40%, of the overall TDM budget.

Program Elements	Services To Be Funded	20 Year Cost (2000 \$\$\$)
Increase Work Options	<ul style="list-style-type: none"> support strategies that change employee commutes such as telework, flexible work hours, and proximate commuting provide staff and incentives to assist employers implementing programs 	\$9,000,000
CTR Incentives and Resources	<ul style="list-style-type: none"> restore tax credits for 300 CTR affected employers in the corridor extend tax credits to 700 smaller employers currently not affected by CTR fund trip reduction programs at 700 additional employers 	\$74,000,000
TMA's	<ul style="list-style-type: none"> assist existing TMA's to deliver trip reduction services to employer members fund start-up costs for 2-3 new TMA's 	\$5,600,000
Parking Cashout	<ul style="list-style-type: none"> provide staff support for highly effective parking strategies at employment sites in the I-405 corridor provide incentives and resources to assist employers with parking reductions finance cash out parking programs 	\$90,400,000

Implementation

Timing: Employer programs require initial investments and periodic updates. Some components can be implemented on a staggered basis – targeting worksites based on construction zones. Development of TMA's can be deferred until mid-way in the project period. And, parking cashout programs can be implemented incrementally.

Roles: A strong network is already in place for delivering employer services and assistance. It includes the state CTR staff, King County Metro, Community Transit, local jurisdictions, TMA's and independent organizations such as Commuter Challenge. All of these organizations should be involved in implementing this TDM element. The services will be coordinated by WSDOT and it is anticipated that the new TDM Committee will play a key role in developing contracts for service delivery.

Construction Mitigation: Employers are an important resource for providing construction information to I-405 employers. Given the high effectiveness of the programs in this element it is recommended that they be regarded as an integral part of mitigation activities.

Land Use as TDM

The objective of this element is to *support land use patterns that reduce demand on the transportation system*. TDM based land use strategies change and reduce automobile trips through compact, mixed use, transit-friendly development and redevelopment.

Although they take a long time to achieve impacts, land use strategies are expected to be the most effective TDM activities in the I-405 corridor in the long term. This element will provide staff support and incentives to jurisdictions and developers to implement TDM supportive land uses in target areas. It also provides funding for important connectivity projects within the I-405 corridor – improving connections and mobility in the corridor. The overall investment for this element is comparably small. The proposed funding is \$24,500,000 over the twenty-year timeline, which accounts for only 5% of the overall TDM budget.

Program Elements	Services To Be Funded	20 Year Cost (2000 \$\$\$)
Support Programs	<ul style="list-style-type: none">provide support programs to help local jurisdictions with land use codes, regulations, zoning, design standards, development review processes, that support compact development	\$6,500,000
Developer/Business Incentives	<ul style="list-style-type: none">develop/implement mechanism to promote desired land uses through tax incentives, F.A.R. bonuses, infrastructure, impact fees, permitting and review processes	\$13,000,000
Local Connectivity Projects	<ul style="list-style-type: none">remove barriers and establish new links for bike, pedestrian and vehicle links in target areasfund smaller “retrofitting” projects such bike paths, flashing crosswalks, fence removal and pavement extensions	\$5,000,000

Implementation

Timing: Land use strategies can be implemented in phases, targeting developing areas and high impact strategies when most appropriate. PSRC and local jurisdictions are already developing some support programs. Incentives and connectivity projects, however, have not been addressed and early implementation is recommended.

Roles: Land use regulation is the responsibility of local jurisdictions, although WSDOT and the PSRC have legislatively mandated responsibilities in plan and project review, consistency, concurrency, and highway management. The administration of this program element will be at the WSDOT TDM Resource Center. It is also anticipated that this element will involve PSRC and local jurisdictions in contractual implementation activities.

Construction Mitigation: Land use activities take a very long time to generate impacts and they have little utility in mitigating the impacts of highway construction.

Other TDM Programs

The TDM measures incorporated into this element enhance the effects of the other strategies, but do not fit into any one category. Each of these strategies is expected to have a high impact, although all require *new research and development activities*.

- *Fare Media Programs* have had surprisingly high impacts and success in the Puget Sound area – most notably through the UW UPASS and FlexPass programs. Variations on these programs have been tested at employment sites. This component would permit wide-scale implementation at corridor neighborhoods and employment centers.
- *Non-commute trips* make up 75-80% of corridor trips, making them a prime target for trip reduction activities. However, there is limited experience with non-work trip TDM strategies. This component will fund research and pilot programs in this new frontier.
- *Incentive Programs* represent the cutting edge of demand management. This element would permit development and implementation of incentives in areas not covered under the land use and employer program elements -- such as freight management and non-work trips.
- *New Park and Ride Leased Lots* are needed to ensure adequate HOV infrastructure within the I-405 corridor. Small, leased lots provide convenient locations to park and join a carpool or vanpool, meet a bus or begin a bike commute.

Program Elements	Services To Be Funded	20 Year Cost (2000 \$\$\$)
Innovative Fare Media	<ul style="list-style-type: none"> ▪ develop new applications for Smart Card or FlexPass programs in the corridor ▪ fund demonstrations, incentives, matching funds, fare media and staffing 	\$20,000,000
Non-Commute Trip TDM	<ul style="list-style-type: none"> ▪ new research funded at \$100,000 annually ▪ demonstration projects funded at \$100,000 annually 	\$4,000,000
Incentives	<ul style="list-style-type: none"> ▪ fund products, improved processes, financial inducements and the repayment of lost revenues 	\$7,000,000
New Park & Ride Leased Lots	<ul style="list-style-type: none"> ▪ staff and implement new program ▪ lease small, convenient parking lots in the corridor ▪ provide small-scale lot improvements as needed 	\$4,600,000

Implementation

Timing: The programs in this element will be developed and implemented on an incremental basis – following research and testing of new concepts. The leased lot program, however, could be initiated very early in the project period then gradually expanded.

Roles: Most of the programs in this element will be developed contractually – through grant programs or competitive bids. Transit agencies are most likely to undertake the fare media programs. Other service providers, including WSDOT, jurisdictions, PSRC, the UW and private sector organizations could be involved in implementing other elements.

Construction Mitigation: Only one program, new Park & Ride Leased Lots will perform well as construction mitigation.

20 Year TDM Funding Plan

TDM Package Elements	20 Year Funding (2000 \$\$\$)	Percent of Total
Core Program	\$19,650,000	4%
Vanpooling	\$159,118,800	35%
Public Information and Education	\$33,750,000	8%
Employer-Based Strategies	\$179,000,000	40%
Land Use	\$24,500,000	5%
Other TDM Programs	\$35,600,000	8%
TOTAL	\$451,618,800	100%

Summary of Estimated TDM Package Effectiveness

TDM Package Element	Estimated Reduction in Daily VMT	Estimated Reduction in AM Peak VMT	Estimated Reduction in PM Peak VMT
Vanpooling	1%	2.7%	1.6%
Public Information, Education & Promotion Programs	0.25% – 0.75%	1.0% - 2.0%	0.7% - 1.5%
Employer-Based Programs	0.5% - 1.0%	2.0% - 3.5%	1.5% - 2.5%
Land Use as TDM	1.0% - 2.5%	3.5% - 5.0%	2.0% - 3.5%
Other TDM Programs	0.5%– 1.0%	1.25% – 2.5%	0.75% - 1.25%
Total Estimated VMT Reduction	3% – 6%	10% - 15%	7% - 10%